

Claims 27-42 are rejected under 35 USC 101 as being drawn to non-statutory subject matter in that independent claims 27 and 34 recite "a first fastener fixed to a first vertebra, a second fastener fixed to a second vertebra" and, as recited, it is the Examiner's position that the claim is attempting to claim part of the human anatomy as part of the invention. This ground of rejection is alleviated by the present amendment in which claims 30(NEW) (including former 27) and 34 now recite that the first and second fasteners are "adapted to be fixed to" a first vertebra and, respectively, a second vertebra.

Claims 27, 30-34, 37-42, 61 and 64 are rejected under 35 USC 102b as being anticipated by Nichols U.S. Patent 6.090.111. The rejection should be withdrawn for the reasons that follow.

Claim 27 (now part of NEW claim 30) recites that the "generally cylindrical wall" has "an interior cylindrical wall surface" with two shoulders that have surfaces that are "inclined in a direction radially outwardly from a center axis of said cup". The '111 patent does not disclose such a feature. The '111 patent discloses a rectangular cap 18 with a dovetail profile that must be slid into position linearly, along straight shoulders in grooves 64, 66. The shoulders 56 do not extend radially outwardly from a center axis of the cup. Instead, they traverse across the cup and are linear, thus not emanating from a single point such as the center axis of a cup. Furthermore, the '111 patent lacks a "generally cylindrical wall" and, instead, has linear walls so that the "cup" is generally rectangular. And the "curved recesses 102a and 102b" ('111 patent, column 5) do not make the walls or the cup "generally cylindrical" as claimed. The recesses are small and are solely for the purpose of allowing clearance of the "curvate head portion 20 of fastener 14" as it passes into the cup.

The '111 patent fails to disclose a "cap" being "generally cylindrically shaped" as required by claim 27. The "cap" 18 of the '111 patent is most undeniably shaped like a three-dimensional rectangle, and not shaped like a cylinder.

Claim 30 recites a "sleeve ring" for supporting the fastener in the cup. The '111 patent does not disclose a sleeve ring as claimed, or anything at all like it. In stating this rejection, the Examiner states that 26 is a sleeve ring. Element 26 of the '111 patent is not a ring, it is referencing "ridges" on the surface of the fastener head. It is part of the fastener head. It is not a separate component that can be characterized as a sleeve ring that supports the fastener head.

With respect to claim 31, the '111 patent does not disclose a "conical" surface on the interior of the cup.

The interior surface 40 of the cup in the '111 patent is "a curved surface area" as stated in the '111 patent. In contrast to a conical surface, which is linear, a curved surface forms a semisphere and not a cone.

Claim 34 is an independent claim that recites similar elements as mentioned above with respect to the preceding claims. The '111 patent does not disclose a sleeve ring, a generally cylindrical wall in a cup, radially extending shoulders, and a generally cylindrically shaped cap— as claimed. The present claims require a seat spacer that rests on top of a fastener head and is beneath the rod "thereby supporting said rod relative to said fastener." The Examiner's characterization of the "split retaining ring 42" of the '111 patent as meeting this limitation is unfounded. The ring 42 is not a spacer, i.e. it does not perform any spacer function. It does not support the rod relative to the fastener as recited by the present claims. In the '111 patent, the rod sits directly on top of the fastener. The split retaining ring 42 merely retains the fastener in the cup prior to assembling the rod and cap, and subsequent tightening. It does not support the rod relative to the fastener.

The present claims further require adding that the spacer has a complementary surface for accommodating the fastener. Not only does the retaining ring 42 fail to meet the claim limitations stated above, but the ring 42 does not have a contact surface that contacts the top of the fastener head as recited. The ring 42 contacts a ringed area surrounding and beneath the top of the fastener head.

Claim 37 requires a sleeve ring. For the reasons stated above, the '111 patent does not disclose a sleeve ring as claimed.

Claim 39 requires a conical surface. For the reasons stated above, the '111 patent does not disclose a conical surface.

Claim 40 requires a sleeve ring resting on a conical surface. For the reasons stated above, the '111 patent discloses neither.

Claim 41 requires a seat spacer between the rod and the fastener, supporting the rod relative to the fastener. For the reasons stated above, the '111 patent discloses neither.

Claims 27-29 and 61-67 are rejected under 35 USC 102e as being anticipated by Bono et al. U.S.

Patent 6.755.829. These rejections are moot in view of the present amendment to the claims.

Claims 30-34 and 37-42 are rejected under 35 USC 103a as being unpatentable over Bono '829 in view of Barker et al. U.S. Patent 6.280.442.

Regarding claim 30, the '829 patent lacks the claimed sleeve ring. The Examiner states that it would have been obvious to modify '829 by providing a sleeve ring without stating why. There is simply no statement of motivation to combine whatsoever. And, in fact, there is no reason to make the combination. Presuming the Examiner meant a sleeve ring as taught by '442, though the Examiner did not even make that clear, the retaining ring 90 of the '442 patent is for a totally different reason than the claimed sleeve ring and if it were used to alter the '829 patent it would substantially change the nature of the '829 patent to the extent it cannot be said to be obvious to one of ordinary skill in the art. The ring 90 of the '442 patent is for the purpose of allowing a specific order of assembly. Specifically, the fastener 50 can be positioned and locked in the cup 30 last. Columns 6 - 8 of the '442 patent explain this in detail. To attempt to modify the '829 patent with this ring 90 of the '442 patent significantly alters the '829 patent, with no reasonable motivation to do so. And the Examiner has not attempted to state a motivation to combine.

Claim 31 requires a conical surface and that the sleeve ring is positioned against a conical surface to support the fastener. The '829 patent has no conical surface. It has a curved surface. The ring of the '442 patent is not taught as being positioned against a conical surface as claimed, or even against a curved surface as shown in the '892 patent. Instead, the ring 90 of the '442 patent is locked into a groove formed by two intersecting linear surfaces that are, respectively, vertical and horizontal (see Fig. 7).

Claim 34 is allowable over the combination of the '829 and '442 patents for the same reasons stated above with respect to claims 30 and 31. For example, the prior art combination lacks the ring as claimed.

Nor can the rejection of claims 37-42 be maintained, as the combination of references, as already discussed above, lacks teachings and obviousness for the claimed elements including the sleeve ring, a conical surface, a sleeve ring resting on a conical surface, and a spacer. The Examiner has not stated how or why the references anticipate or render obvious any of the limitations of these claims.

For the foregoing reasons, the following claims are in condition for allowance. Favorable action is requested. Claims in condition for allowance: 30, 31, 34, 35, 36, 37, 38, 39, 40, 41, and 42.

Respectfully submitted,

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